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RAW SEQUENCE LISTING   DATE: 07/30/2004
PATENT APPLICATION: US/10/623,036   TIME: 14:07:48

Input Set : **N:\Crf3\RULE60\10623036.raw**
Output Set: **N:\CRF4\07302004\J623036.raw**

SEQUENCE LISTING
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 3 (1) GENERAL INFORMATION:
 5       (i) APPLICANT: Stemmer, Willem P.C.
 6                      Crameri, Andreas
 8      (ii) TITLE OF INVENTION: DNA Mutagenesis by Random Fragmentation
 9                      and Reassembly
11     (iii) NUMBER OF SEQUENCES: 62
13      (iv) CORRESPONDENCE ADDRESS:
14           (A) ADDRESSEE: Townsend and Townsend and Crew LLP
15           (B) STREET: Two Embarcadero Center, 8th Floor
16           (C) CITY: San Francisco
17           (D) STATE: CA
18           (E) COUNTRY: USA
19           (F) ZIP: 94111
21       (v) COMPUTER READABLE FORM:
22           (A) MEDIUM TYPE: Floppy disk
23           (B) COMPUTER: IBM PC compatible
24           (C) OPERATING SYSTEM: PC-DOS/MS-DOS
25           (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
27      (vi) CURRENT APPLICATION DATA:
C--> 28       (A) APPLICATION NUMBER: US/10/623,036
C--> 29       (B) FILING DATE: 18-Jul-2003
W--> 35       (C) CLASSIFICATION: 435
C--> 36     (vii) PRIOR APPLICATION DATA:
W--> 33       (A) APPLICATION NUMBER: US/08/537,874
34            (B) FILING DATE: 04-MAR-1996
W--> 37       (A) APPLICATION NUMBER: EP PCT/US95/02126
38            (B) FILING DATE: 17-FEB-1995
W--> 40       (A) APPLICATION NUMBER: US 08/198,431
41            (B) FILING DATE: 17-FEB-1994
C--> 43    (viii) ATTORNEY/AGENT INFORMATION:
44            (A) NAME: Liebeschuetz, Joe
45            (B) REGISTRATION NUMBER: 37,505
46            (C) REFERENCE/DOCKET NUMBER: 018097-014610
C--> 48      (ix) TELECOMMUNICATION INFORMATION:
49            (A) TELEPHONE: 415-576-0200
50            (B) TELEFAX: 415-576-0300
53 (2) INFORMATION FOR SEQ ID NO: 1:
55       (i) SEQUENCE CHARACTERISTICS:
56           (A) LENGTH: 20 base pairs
57           (B) TYPE: nucleic acid
58           (C) STRANDEDNESS: single
59           (D) TOPOLOGY: linear
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Output Set: N:\CRF4\07302004\J623036.raw

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65      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
67 AAAGCGTCGA TTTTTGTGAT                                        20
69 (2) INFORMATION FOR SEQ ID NO: 2:
71      (i) SEQUENCE CHARACTERISTICS:
72           (A) LENGTH: 20 base pairs
73           (B) TYPE: nucleic acid
74           (C) STRANDEDNESS: single
75           (D) TOPOLOGY: linear
81      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
83 ATGGGGTTCC GCGCACATTT                                        20
85 (2) INFORMATION FOR SEQ ID NO: 3:
87      (i) SEQUENCE CHARACTERISTICS:
88           (A) LENGTH: 18 base pairs
89           (B) TYPE: nucleic acid
90           (C) STRANDEDNESS: single
91           (D) TOPOLOGY: linear
97      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
99 TTAGGCACCC CAGGCTTT                                          18
101 (2) INFORMATION FOR SEQ ID NO: 4:
103      (i) SEQUENCE CHARACTERISTICS:
104           (A) LENGTH: 18 base pairs
105           (B) TYPE: nucleic acid
106           (C) STRANDEDNESS: single
107           (D) TOPOLOGY: linear
113      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
115 ATGTGCTGCA AGGCGATT                                         18
117 (2) INFORMATION FOR SEQ ID NO: 5:
119      (i) SEQUENCE CHARACTERISTICS:
120           (A) LENGTH: 29 base pairs
121           (B) TYPE: nucleic acid
122           (C) STRANDEDNESS: single
123           (D) TOPOLOGY: linear
129      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
131 AACGCCGCAT GCAAGCTTGG ATCCTTATT                              29
133 (2) INFORMATION FOR SEQ ID NO: 6:
135      (i) SEQUENCE CHARACTERISTICS:
136           (A) LENGTH: 30 base pairs
137           (B) TYPE: nucleic acid
138           (C) STRANDEDNESS: single
139           (D) TOPOLOGY: linear
145      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
147 AAAGCCCTCT AGATGATTAC GAATTCATAT                             30
149 (2) INFORMATION FOR SEQ ID NO: 7:
151      (i) SEQUENCE CHARACTERISTICS:
152           (A) LENGTH: 46 base pairs
153           (B) TYPE: nucleic acid
154           (C) STRANDEDNESS: single
155           (D) TOPOLOGY: linear
161      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
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163 TTCTATTGAC GGCCTGTCAG GCCTCATATA TACTTTAGAT TGATTT                      46
165 (2) INFORMATION FOR SEQ ID NO: 8:
167     (i) SEQUENCE CHARACTERISTICS:
168         (A) LENGTH: 56 base pairs
169         (B) TYPE: nucleic acid
170         (C) STRANDEDNESS: single
171         (D) TOPOLOGY: linear
177     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
179 TTGACGCACT GGCCATGGTG GCCAAAAATA AACAAATAGG GGTTCCGCGC ACATTT          56
181 (2) INFORMATION FOR SEQ ID NO: 9:
183     (i) SEQUENCE CHARACTERISTICS:
184         (A) LENGTH: 45 base pairs
185         (B) TYPE: nucleic acid
186         (C) STRANDEDNESS: single
187         (D) TOPOLOGY: linear
193     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
195 AACTGACCAC GGCCTGACAG GCCGGTCTGA CAGTTACCAA TGCTT                       45
197 (2) INFORMATION FOR SEQ ID NO: 10:
199     (i) SEQUENCE CHARACTERISTICS:
200         (A) LENGTH: 44 base pairs
201         (B) TYPE: nucleic acid
202         (C) STRANDEDNESS: single
203         (D) TOPOLOGY: linear
209     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
211 AACCTGTCCT GGCCACCATG GCCTAAATAC ATTCAAATAT GTAT                       44
213 (2) INFORMATION FOR SEQ ID NO: 11:
215     (i) SEQUENCE CHARACTERISTICS:
216         (A) LENGTH: 31 base pairs
217         (B) TYPE: nucleic acid
218         (C) STRANDEDNESS: single
219         (D) TOPOLOGY: linear
225     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
227 AGTTGGGTGG ACGAGTGGGT TACATCGAAC T                                     31
229 (2) INFORMATION FOR SEQ ID NO: 12:
231     (i) SEQUENCE CHARACTERISTICS:
232         (A) LENGTH: 33 base pairs
233         (B) TYPE: nucleic acid
234         (C) STRANDEDNESS: single
235         (D) TOPOLOGY: linear
241     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
243 AACCCACTCG TCCACCCAAC TGATCTTCAG CAT                                   33
245 (2) INFORMATION FOR SEQ ID NO: 13:
247     (i) SEQUENCE CHARACTERISTICS:
248         (A) LENGTH: 41 base pairs
249         (B) TYPE: nucleic acid
250         (C) STRANDEDNESS: single
251         (D) TOPOLOGY: linear
257     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
259 AGTAAAAGAT GCTGAAGATA AGTTGGGTGC ACGAGTGGGT T                          41
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            Input Set : N:\Crf3\RULE60\10623036.raw
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261 (2) INFORMATION FOR SEQ ID NO: 14:
263   (i) SEQUENCE CHARACTERISTICS:
264   (A) LENGTH: 24 base pairs
265   (B) TYPE: nucleic acid
266   (C) STRANDEDNESS: single
267   (D) TOPOLOGY: linear
273   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
275 ACTTATCTTC AGCATCTTTT ACTT   24
277 (2) INFORMATION FOR SEQ ID NO: 15:
279   (i) SEQUENCE CHARACTERISTICS:
280   (A) LENGTH: 32 base pairs
281   (B) TYPE: nucleic acid
282   (C) STRANDEDNESS: single
283   (D) TOPOLOGY: linear
289   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
291 AAGAGCAACT CAGTCGCCGC ATACACTATT CT   32
293 (2) INFORMATION FOR SEQ ID NO: 16:
295   (i) SEQUENCE CHARACTERISTICS:
296   (A) LENGTH: 36 base pairs
297   (B) TYPE: nucleic acid
298   (C) STRANDEDNESS: single
299   (D) TOPOLOGY: linear
305   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
307 ATGGCGGCGA CTGAGTTGCT CTTGCCCGGC GTCAAT   36
309 (2) INFORMATION FOR SEQ ID NO: 17:
311   (i) SEQUENCE CHARACTERISTICS:
312   (A) LENGTH: 42 base pairs
313   (B) TYPE: nucleic acid
314   (C) STRANDEDNESS: single
315   (D) TOPOLOGY: linear
321   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
323 TATTCTCAGA ATGACTTGGT TAAGTACTCA CCAGTCACAG AA   42
325 (2) INFORMATION FOR SEQ ID NO: 18:
327   (i) SEQUENCE CHARACTERISTICS:
328   (A) LENGTH: 22 base pairs
329   (B) TYPE: nucleic acid
330   (C) STRANDEDNESS: single
331   (D) TOPOLOGY: linear
337   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:
339 TTAACCAAGT CATTCTGAGA AT   22
341 (2) INFORMATION FOR SEQ ID NO: 19:
343   (i) SEQUENCE CHARACTERISTICS:
344   (A) LENGTH: 36 base pairs
345   (B) TYPE: nucleic acid
346   (C) STRANDEDNESS: single
347   (D) TOPOLOGY: linear
353   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:
355 AACGACGAGC GTGACACCAC GACGCCTGTA GCAATG   36
357 (2) INFORMATION FOR SEQ ID NO: 20:

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359       (i) SEQUENCE CHARACTERISTICS:
360            (A) LENGTH: 22 base pairs
361            (B) TYPE: nucleic acid
362            (C) STRANDEDNESS: single
363            (D) TOPOLOGY: linear
369      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:
371 TCGTGGTGTC ACGCTCGTCG TT                                              22
373 (2) INFORMATION FOR SEQ ID NO: 21:
375       (i) SEQUENCE CHARACTERISTICS:
376            (A) LENGTH: 42 base pairs
377            (B) TYPE: nucleic acid
378            (C) STRANDEDNESS: single
379            (D) TOPOLOGY: linear
385      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:
387 TTGCTGATAA ATCTGGAGCC AGTGAGCGTG GGTCTCGCGG TA                        42
389 (2) INFORMATION FOR SEQ ID NO: 22:
391       (i) SEQUENCE CHARACTERISTICS:
392            (A) LENGTH: 21 base pairs
393            (B) TYPE: nucleic acid
394            (C) STRANDEDNESS: single
395            (D) TOPOLOGY: linear
401      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:
403 TGGCTCCAGA TTTATCAGCA A                                              21
405 (2) INFORMATION FOR SEQ ID NO: 23:
407       (i) SEQUENCE CHARACTERISTICS:
408            (A) LENGTH: 30 base pairs
409            (B) TYPE: nucleic acid
410            (C) STRANDEDNESS: single
411            (D) TOPOLOGY: linear
417      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:
419 ATGCTCACTG GCTCCAGATT TATCAGCAAT                                     30
421 (2) INFORMATION FOR SEQ ID NO: 24:
423       (i) SEQUENCE CHARACTERISTICS:
424            (A) LENGTH: 36 base pairs
425            (B) TYPE: nucleic acid
426            (C) STRANDEDNESS: single
427            (D) TOPOLOGY: linear
433      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:
435 TCTGGAGCCA GTGAGCATGG GTCTCGCGGT ATCATT                              36
437 (2) INFORMATION FOR SEQ ID NO: 25:
439       (i) SEQUENCE CHARACTERISTICS:
440            (A) LENGTH: 70 base pairs
441            (B) TYPE: nucleic acid
442            (C) STRANDEDNESS: single
443            (D) TOPOLOGY: linear
449      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:
451 AACCTGTCCT GGCCACCATG GCCTAAATAC AATCAAATAT GTATCCGCTT ATGAGACAAT     60
453 AACCCTGATA                                                           70
455 (2) INFORMATION FOR SEQ ID NO: 26:
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VERIFICATION SUMMARY   DATE: 07/30/2004
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Input Set : **N:\Crf3\RULE60\10623036.raw**
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L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:35 M:238 W: Alpha Fields not Ordered, Reordered [(C) CLASSIFICATION:] of (1)(vi)
L:36 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]
L:40 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1)(vii)
L:43 M:220 C: Keyword misspelled or invalid format, [(viii) ATTORNEY/AGENT INFORMATION:]
L:48 M:220 C: Keyword misspelled or invalid format, [(ix) TELECOMMUNICATION INFORMATION:]
L:1093 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=62